

**Amendments to the Specification:**

Please amend **paragraph [0011] and [0034]** as follows:

[0011] Correlator 212 also provides input to a frequency offset estimator 218.

Frequency offset estimator 218 determines whether there is any frequency offset between a local oscillator and the received carrier frequency. Such a frequency offset manifests itself as a progressive phase shift across the samples corresponding to a particular symbol. The progressive phase shift looks like a slope or tilt when plotted versus time across the phase estimates of a symbol. Frequency offset estimator 218 determines the amount of progressive phase shift across the samples of the symbol. Using the progressive phase shift information determined by frequency estimator 218, a frequency correction is calculated in a phase adjuster 220 for each sample of the symbol. The quantities  $Z_q(t)$  and  $Z_i(t)$  shown in phase adjuster 220 of Fig. 2 refer to the quadrature and in-phase components of each sample of the symbol.

[0034] Frequency offset calculator 306 determines a phase correction due to any frequency offset between receiver and transmitter carrier frequency oscillators. In frequency offset calculator 306, the I and Q components are compared to a delayed conjugated version of themselves in a phase detector 320. The delayed conjugated version of the signal is generated by passing the input signal through a delay circuit 316 and a conjugator 318 ~~314~~. Conjugator 318 ~~314~~ reverses the sign of the Q component. The delay circuit 316 delays the I and Q components for the duration of a sample. That is, the delay is  $T_{\text{sym}}/N$ , where N is preferably number of samples per symbol. Consequently, this calculation is an intra-symbol phase shift calculation.